



RGMA Monitoring Framework

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Monitoring Landscape



- Monitoring Applications
 - GPPMON, LCG2 Real Time Monitor
 - GridICE, TestZone Report, Gstat
- Different strengths and focus
- Different data format and storage mechanisms
- Shares some information
 - Site maintenance information
 - Test results
 - Statistics



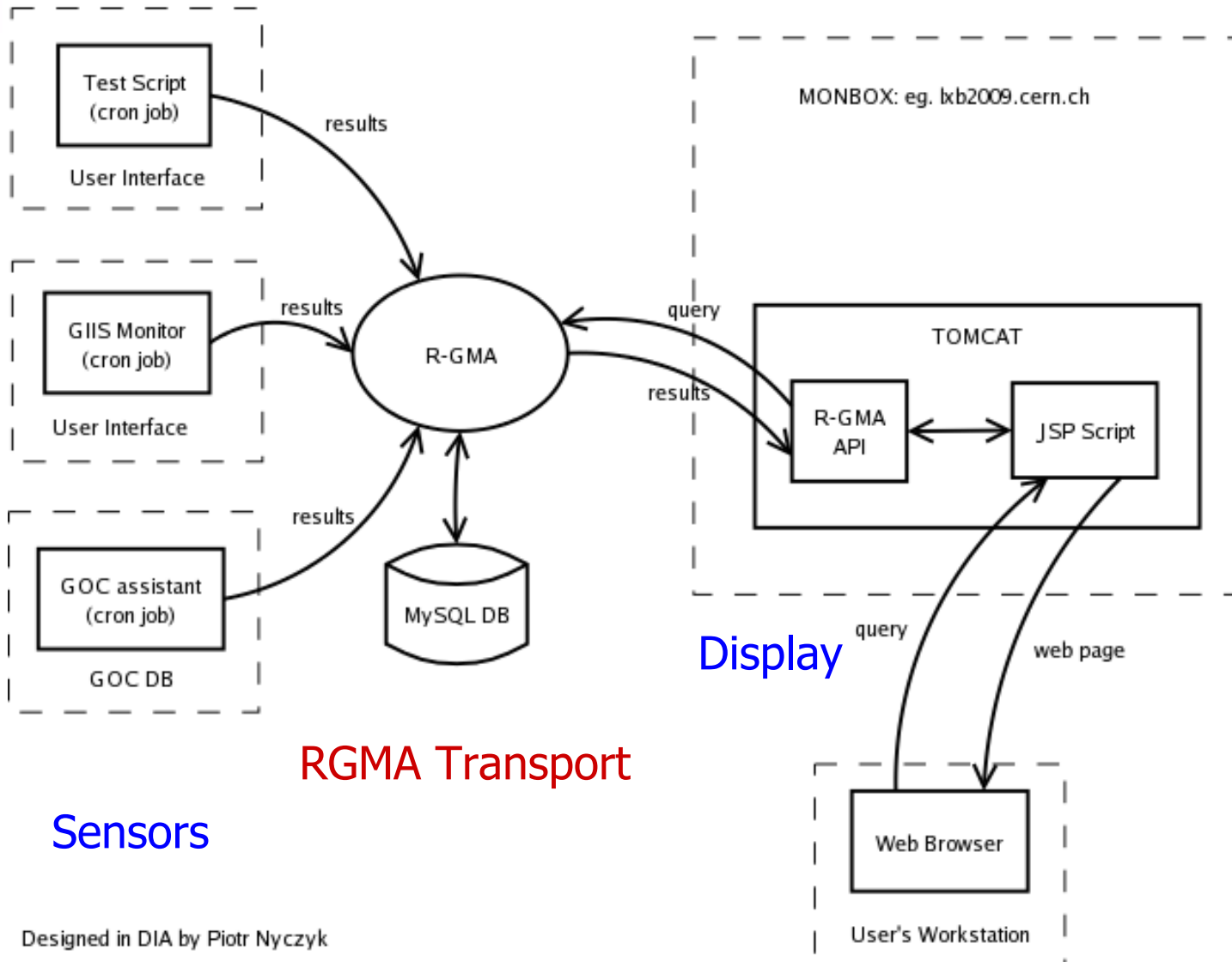
RGMA Monitoring Framework



- Provide unified framework for LCG monitoring
- Benefits
 - Applications easily broken up into distributed sensors
 - Different applications using same data transport
 - Applications can exchange data – build dependencies
 - Uniform access to all monitoring data
 - Displays can access all data
 - Selectively collect data and create custom views
 - CIC, GOC, site administrators



Diagram of R-GMA based monitoring system





Sensors



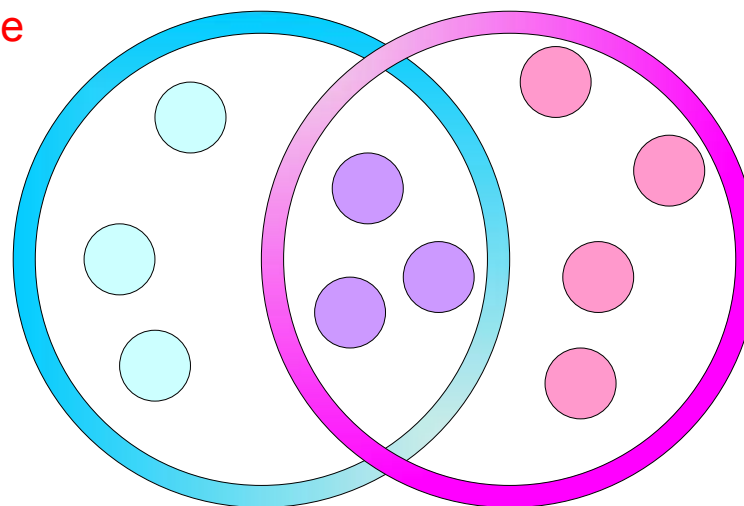
- Procedure
 - Collect data
 - Create a Continuous Producer
 - Get connection information
 - Declare table to use
 - Insert data
- Archiver plus Latest and DB Producer
- For frequent updates, connection reuse speeds up inserts



Unified Schema



- **TestDef_v0_2**
 - Test are registered here
 - Provides information about test
 - testName, friendlyName, isVirtual
 - dataType, Unit
 - testHelp, testTitle
- **TestDefRelation_v0_2**
 - Defines logical test groups and organize tests
 - superTestName, subTestName
 - displayPriority, flavour

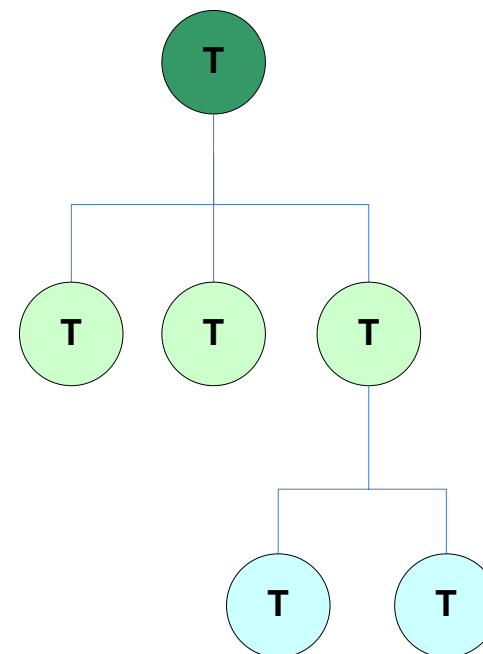




Unified Schema (cont.)



- **TestData_v0_1**
 - Holds data produced by test
 - testName
 - nodeName
 - summaryData
 - detailedData
 - Status
 - 0:NA, 10:OK, 20:INFO, etc.
- **TestDataRelation_v0_1**
 - Defines test data dependencies
 - superTestName, superNodeName
 - subTestName, subNodeName





Display



- Procedure
 - Create Consumer with query string
 - Start the query
 - Read data
 - Generate Display
- Implementation
 - Download configuration on demand
 - Latest and History queries used
 - Would benefit from a larger set of queries
 - Nested queries
 - Distinct records



Start Page



R-GMA GOC UI - Mozilla

File Edit View Go Bookmarks Tools Window Help

http://lxb2001.cern.ch/~kiryanov/new/

R-GMA GOC UI

R-GMA GOC UI

Welcome, dear user !

Please select site and test to display.

Sites panel:

View: Table Summary History Map

Tests panel:



Expanded View



The screenshot shows a Mozilla browser window titled "R-GMA GOC UI - Mozilla" with the address bar containing "http://lxb2001.cern.ch/~kiryanov/new/". The main content area displays "R-GMA GOC UI" in blue text, followed by "Welcome, dear user !" and "Please select site and test to display." in bold black text. On the left, a "Sites" panel lists various locations including BNL, CERN, Canada, Central-Europe, China, FNAL, France, Germany, HP, Italy, Northern, Russia, and South East. On the right, a "Tests" panel lists various test categories such as BDIIUpdate, GIISQuery, freeCPU, runJob, sanity, seAvail TB, seUsed TB, totalCPU, version, waitJob, RRDFetch, Test Job Submission, and Replica Management. At the bottom, there are "W3C HTML 4.01" and "W3C CSS" logos, and a "View:" menu with options for "Table", "Summary", "History", and "Map". The "Sites panel:" and "Tests panel:" are both set to "Hide".



Table View



R-GMA GOC UI - Mozilla

File Edit View Go Bookmarks Tools Window Help

http://lxb2001.cern.ch/~kiryanov/new/

R-GMA GOC UI

R-GMA GOC UI

	seAvail TB	seUsed TB	totalCPU	version	BrokerInfo	CSH test
bnl.gov				na	n/a	n/a
n2p3.fr	0.395124107599 GB	0.218035072088 GB	58 CPU	LCG-2_2_0	OK	OK
hep.su	2.13518680632 GB	0.107237074524 GB	97 CPU	LCG-2_2_0	OK	OK
gg.com	0.0462961681187 GB	8.46460461617e-05 GB	24 CPU	LCG-2_2_0	OK	OK
.itep.ru	1.97323209047 GB	0.0142647735775 GB	40 CPU	LCG-2_2_0	OK	OK
n2p3.fr	—	—	—	—	OK	OK
n2p3.fr	0.717467822134 GB	0.0025876276195 GB	54 CPU	LCG-2_1_1	OK	OK
nal.gov	35.5231894189 GB	0.183841831051 GB	250 CPU	LCG-2_2_0	OK	OK
ssieu.fr	0.424807254225 GB	0.000652398914099 GB	3 CPU	LCG-2_2_0	OK	OK
msu.ru	0.625834684819 GB	0.224497977644 GB	16 CPU	LCG-2_2_0	OK	OK
.jinr.ru	1.70240090042 GB	0.00388535484672 GB	20 CPU	LCG-2_2_0	OK	OK
cern.ch	933.261353479 GB	465.66989494 GB	954 CPU	LCG-2_2_0	n/a	n/a
cern.ch	—	—	—	—	OK	OK
	seAvail TB	seUsed TB	totalCPU	version	BrokerInfo	CSH test

Sites panel: Hide

View: Table Summary History Map

Tests panel: Hide

- Tests
 - BDIIUpdate
 - GIISQuery
 - freeCPU
 - runJob
 - sanity
 - seAvail TB
 - seUsed TB
 - totalCPU
 - version
 - waitJob
 - RRDFetch
 - Test Job Submission
 - BDII (RM)
 - BrokerInfo
 - CA RPMs Version
 - CSH test
 - R-GMA Test
 - Replica Management
 - edg-rm tests
 - lcb-utils tests
 - Software Version
 - WorkerNode name



Summary View



R-GMA GOC UI - Mozilla

File Edit View Go Bookmarks Tools Window Help

http://lxb2001.cern.ch/~kiryanov/new/

R-GMA GOC UI

R-GMA GOC UI

atlasgrid04.usatlas.bnl.gov	
cclcgceli01.in2p3.fr	
ce001.m45.ihep.su	
ce1.egee.fr.cgg.com	
ceitep.itep.ru	
clrce01.in2p3.fr	
clrglop195.in2p3.fr	
hudson.datagrid.jussieu.fr	
lcg06.sinp.msu.ru	
lcgce01.jinr.ru	
lxn1181.cern.ch	
lxn1184.cern.ch	

Sites panel:

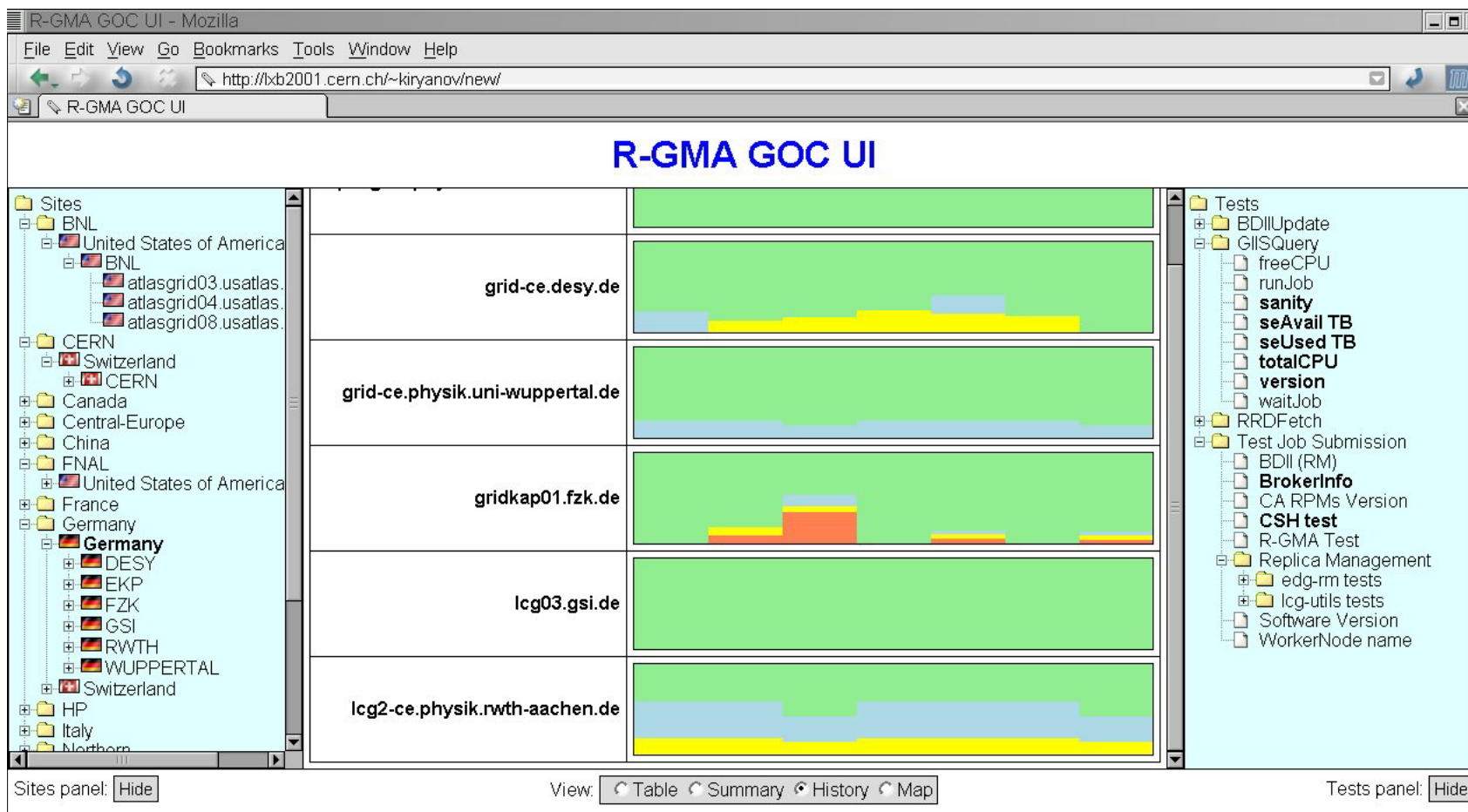
View: Table Summary History Map

Tests panel:

- Tests
 - BDIUpdate
 - GISQuery
 - freeCPU
 - runJob
 - sanity
 - seAvail TB
 - seUsed TB
 - totalCPU
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 - Replica Management
 - edg-rm tests
 - lcg-utils tests
 - Software Version
 - WorkerNode name

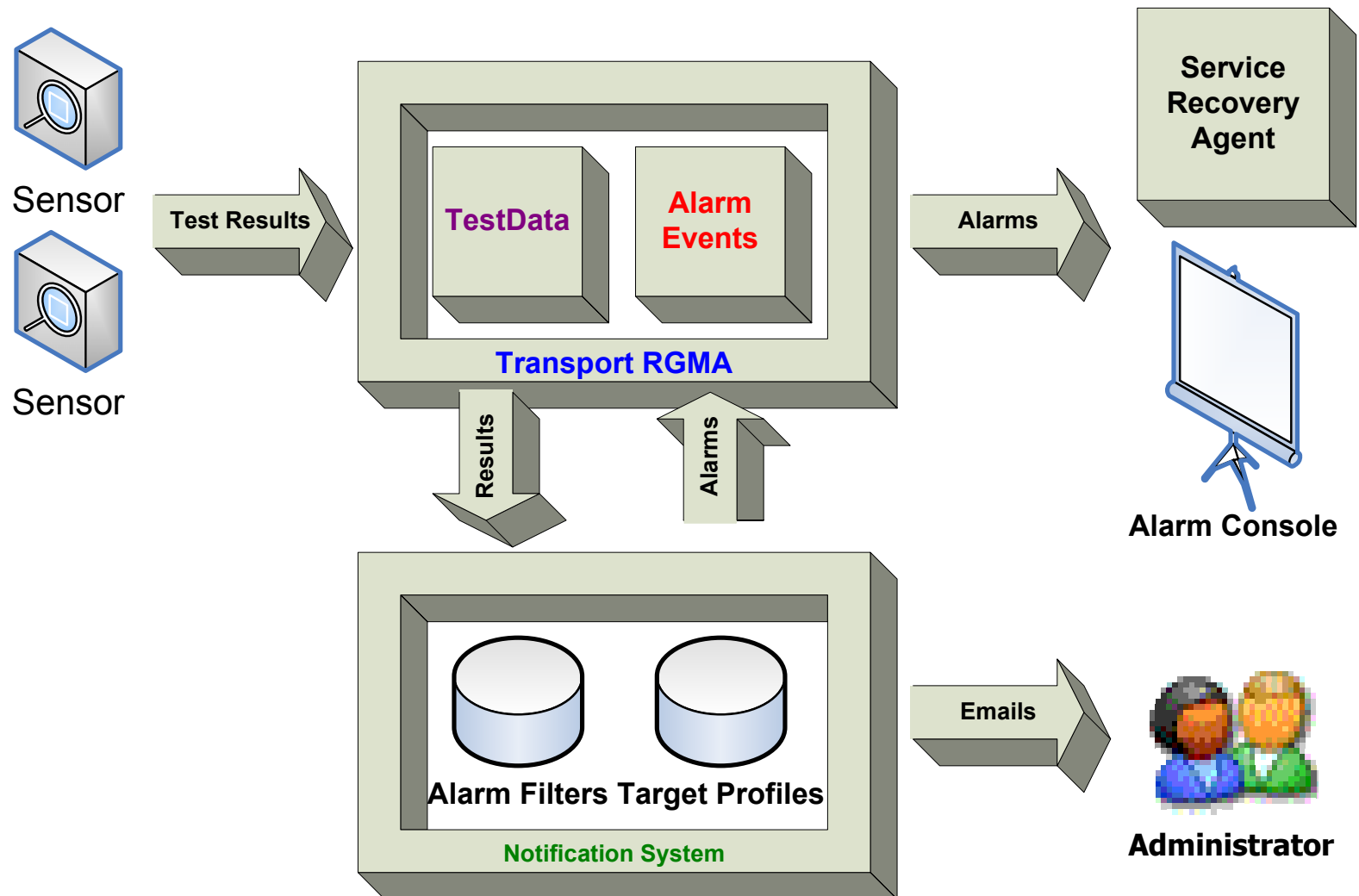


History View





Alarm Integration





More Information



- <http://goc.grid.sinica.edu.tw/gocwiki/RgmaUnifiedMonitoringSystem>
- Piotr Nyczyk, Judit Novak, Andrey Kiryanov, Dave Kant, Min Tsai